Seasonal Heating Boilers

Many businesses rely on hot water boilers or steam boilers to provide seasonal heat. Like most equipment, boilers require preventative maintenance, inspection, and operator care to ensure applicable control features and safety devices are functioning properly. Control functions and safety devices are particularly vital for safe boiler operation.

Personnel working with boilers should be familiar with boiler operating and maintenance principals. In all cases, the boiler manufacturer's operating and maintenance procedures should be followed in addition to jurisdictional requirements. Listed below are basic inspection and maintenance guidelines appropriate for most heating boilers.

Annually, prior to heating season:

Visual Inspections	The watersides should be examined for signs of corrosion and pitting, remnants of scale and sludge, erosion, cracking, and any other abnormal condition. The fireside should be examined for flame impingement, soot buildup, damaged refractory and indications of leaking.
Fireside Spaces	Products of combustion build up as soot on the fireside of a boiler. Soot, like scale, acts as an insulator on the fireside of the boiler metal. Excessive soot formation can lead to accelerated corrosion, which could shorten the life of the boiler.
Waterside Surfaces	Scale from impurities in the water can accumulate on the inside surface of the boiler. This can act as an insulator, reducing fuel efficiency and causing the boiler to operate at a hotter-than-normal temperature. As a result, the increased thermal and mechanical stress can affect the structural integrity of the boiler.
Burner Components	A burner that is out of adjustment can result in decreased fuel efficiency, accelerated soot buildup, and increased thermal stress from flame impingement. These factors may result in increased operating costs due to increased fuel usage.
Operating Controls & Safety Devices	Controls are installed to keep the boiler operating normally. They often work in conjunction with safety devices, which are installed to help prevent a boiler from exceeding designed temperature and pressure limits. A boiler exceeding its designed temperature or pressure could fail catastrophically.

During Heating Season:

Weekly Activities	- Test the low water fuel cutoff device(s) - Blow down the water column and gauge glass - Inspect for leaks and clean the area around the boiler
Quarterly Activities	- Have the safety valve(s) tested - Perform a bottom blowdown

Note: Many states require operating permits for boilers, contingent upon periodic inspection. Some tests and examinations may be subject to different requirements than those noted above. Contact your Travelers representative or your State's Safety Office for more information.

For further guidance on boiler operations, maintenance, and safety, see the related resources associated with this guide or contact a qualified Travelers boiler inspector.